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United States Department of Agriculture

INSECTICIDE AND FUNGICIDE BOARD

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SERVICE AND REGULATORY ANNOUNCEMENTS [1]

NO. 48

OPINIONS OF GENERAL INTEREST REGARDING QUESTIONS ARISING UNDER THE INSECTICIDE ACT OF 1910

58. Notice to Manufacturers Relative to the Ineffectiveness of Preparations Administered to Chickens in Food or Drinking Water to Control Lice, Mites, and Other External Parasites.

Efficiency tests have been made by the board of a number of proprietary products found on the market.

POWDERS TO BE MIXED WITH FOOD

(1) A product containing sulphur, charcoal, and ferrous sulphate, to be fed to chickens to control poultry ticks (blue bugs), was found to be ineffective in controlling the insect.

(2) A product containing magnesium sulphate, sulphur, nux vomica, and capsicum, and recommended to be fed to chickens for the control of lice, was found to be ineffective.

(3) A product containing sulphur, common salt, sodium carbonate, napthalene, lime, and sand, and recommended to be fed to chickens for the control of lice and red mites, was found to be ineffective.

LIME-SULPHUR SOLUTIONS TO BE ADDED TO DRINKING WATER

(4) A product consisting of concentrated lime-sulphur solution and containing 3.25 per cent calcium thiosulphate and 30 per cent calcium polysulphide, recommended to be given to chickens in their drinking water for the control of lice and red mites, was found to be ineffective.

(5) A product consisting of concentrated lime-sulphur solution and containing 3 per cent calcium thiosulphate, 28.5 per cent calcium polysulphide, and 0.25 per cent calcium sulphate, recommended to be given to chickens in their drinking water for the control of lice and red mites, was found to be ineffective.

TABLETS TO BE ADDED TO DRINKING WATER

(6) A product containing 32 per cent calcium sulphide, 8 per cent calcium thiosulphate, 10 per cent calcium sulphate, free lime, magnesium oxide, iron and aluminum oxides, silica, starch, and charcoal, and recommended to be given to chickens in their drinking water for the control of lice and red mites, was found to be ineffective.

(7) A preparation containing 24 per cent calcium sulphide, 1.5 per cent calcium thiosulphate, 7 per cent calcium sulphate, 3 per cent sodium sulphate, 5 per cent sulphur, calcium carbonate, lime, silica, charcoal, and starch, and recommended to be given to chickens in their drinking water for the control of lice and red mites, was found to be ineffective.

(8) A preparation containing 51 per cent calcium sulphide, 13 per cent calcium sulphate, 1 per cent calcium thiosulphate, 8 per cent lime, 6 per cent talc and starch, and recommended to be given to chickens in their drinking water for the control of lice and mites, was found to be ineffective.

The tests mentioned above show that sulphur, charcoal, and ferrous sulphate, used in the amounts recommended by a manufacturer, are not effective in

[1] Free distribution will be limited to firms, establishments, and journals especially concerned. Others desiring copies may obtain them from the Superintendent of Documents, Government Printing Office, Washington, D. C., at 5 cents each.

controlling ticks (blue bugs) on chickens when fed to same; that magnesium sulphate, sulphur, nux vomica, and capsicum, used in the amounts recommended by a manufacturer, are not effective in controlling lice on chickens when fed to same, and that sulphur, common salt, sodium carbonate, naphthalene, lime, sand, concentrated lime—sulphur solution (containing calcium polysulphide, calcium thiosulphate, and calcium sulphate), calcium sulphide, magnesium oxide, iron and aluminum oxides, silica, starch, charcoal, sodium sulphate, calcium carbonate, and talc, used in the amounts recommended by several manufacturers, are not effective in controlling lice and red mites on chickens when fed to same.

The board is of the opinion that these tests are sufficient to strongly indicate that preparations made from sulphur, charcoal, or ferrous sulphate, or any combination of same, are ineffective against chicken ticks (blue bugs) when fed to chickens; that preparations made from magnesium sulphate, sulphur, nux vomica, and capsicum, or any combination of same, are ineffective against chicken lice when fed to chickens, and that preparations made from the remaining ingredients listed above, or any combination of same, are ineffective against chicken lice and red mites when fed to chickens.

Tests have not been made of all the substance enumerated above against all insects that may infest chickens externally, but, taking into consideration the tests outlined above and the anatomy and physiology of chickens, it is believed that it is unlikely that any of the substances enumerated, or any combination of same, when fed to chickens will control any of the external parasites infesting same. It is further believed that it is extremely doubtful if any substance or mixture of substances will be found that, when fed to chickens, will control external parasites on same.

The above information is given for the benefit of manufacturers who may be selling, or contemplate selling, a product to control external parasites on chickens, which product is to be administered internally, since if a product is claimed to control any specific external parasite or parasites, and when tested in accordance with the directions given, is not effective in controlling such parasite or parasites, it is misbranded under the provisions of the Insecticide act of 1910.

59. Notice to Manufacturers of Pine Oil Disinfectants.

Tests of pine-oil disinfectants, prepared from various grades of pine oils, made by the board show that they are effective in killing *B. typhosus*, when used in proper dilution. Further tests of pine-oil disinfectants, prepared from various grades of pine oils, show that they are not effective in killing *M. aureus* and *B. anthracis* in any dilution capable of emulsification. The board has not tested pine-oil disinfectants against any organisms other than those enumerated above and has not been able to find any record in the literature of such tests having been made.

Since pine-oil disinfectants will not kill *M. aureus* in any dilutions capable of emulsification, it is the opinion of the board that these disinfectants should not be recommended or sold for the purpose of disinfecting wounds, sores, boils, etc. The board is further of the opinion that pine-oil disinfectants should not be recommended or sold for general disinfecting purposes, since a general disinfectant should certainly kill the pyogenic micro-organisms, these being apt to be present in many or most cases where a general disinfectant is required.

In the present state of our knowledge it is believed that one is only justified in recommending pine-oil disinfectants in those cases in which *B. typhosus* is the organism that is to be killed, as, for example, in the disinfection of typhoid stools, disinfection of typhoid sick rooms, and in the disinfection of bed clothes, utensils, etc., used by typhoid patients. If further tests made by competent bacteriologists show that pine-oil disinfectants are effective against other organisms than *B. typhosus*, then one is of course justified in claiming effectiveness for pine-oil disinfectants against such organisms.

60. Use of Paradichlorobenzene as a Disinfectant.

The board has received numerous letters from manufacturers of disinfectants requesting information relative to the value of paradichlorobenzene as a disinfectant. Tests with pure samples of this material show that it is not an effective disinfectant either when used as a fumigant or when used in the presence of moisture. Therefore paradichlorobenzene is an inert ingredient in various powders, blocks, etc., intended for use as disinfectants.

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